

ANNEX 3 (ESF-3)

PUBLIC WORKS AND ENGINEERING

PRIMARY: Budget and Control Board, Division of Procurement Services, Materials Management Office

SUPPORT: Civil Air Patrol; Clemson University Cooperative Extension Service and Regulatory and Public Service Programs; Department of Agriculture; Department of Health and Environmental Control, Office of Environmental Quality Control; Department of Labor, Licensing and Regulation, Division of Fire and Life Safety; Department of Natural Resources, Land, Water, and Conservation; Department of Public Safety; Department of Revenue; Department of Transportation; Forestry Commission; Office of Regulatory Staff; US Army Corps of Engineers

I. INTRODUCTION

- A. State assistance for this function consists of two components: public works and damage assessment.
- B. Public works refers to those engineering and procurement activities required to provide or restore: emergency power supplies for critical facilities; water and sewer services, including emergency supply of potable water, temporary restoration of water supply and sewer systems, and providing water for firefighting. Engineering activities include emergency ice, snow and debris removal; technical expertise regarding the structural safety of damaged buildings, bridges and highways; restoration of transportation infrastructure; coordination of emergency repairs to public facilities; appropriate construction services (i.e., electrical, plumbing, soils, etc.), and emergency demolition or stabilization of damaged structures and facilities designated as hazards to public health and safety.
- C. Damage assessment includes safety evaluation, assessing, recording and reporting of damage to public and private property. Timely and accurate damage assessment information collection, recording, and reporting are critical during and following an emergency or disaster. This information is essential to determine the need for state and/or federal assistance and to document local response and recovery expenditures. ESF-3 will provide assistance to SCEMD including personnel, equipment and technical expertise necessary to assess damage resulting from an emergency or disaster to state and/or local facilities and property.

II. MISSION

- A. To establish policy, procedures, and priorities for the control and restoration of transportation infrastructure, water resources, and sewer

facilities and to provide for coordinating immediate and continued engineering resources, construction management, emergency contracting, and expertise following a disaster.

- B. To provide an accurate assessment of damages, losses, and expenditures resulting from an emergency or disaster in order to determine the need for state and/or federal assistance and to conduct safety evaluations to protect the public health and welfare.

III. CONCEPT OF OPERATIONS

- A. The Budget and Control Board, Division of Procurement Services, Materials Management Office, is responsible for the coordination of all ESF-3 administrative, management, planning, training, preparedness, mitigation, response, and recovery activities to include developing, coordinating, and maintaining the ESF-3 SOP. All ESF-3 supporting agencies will assist the Office of Material Management, Division of Procurement Services, Budget and Control Board, in the planning and execution of the above. All ESF-3 personnel will be trained on the principles of the National Incident Management System (NIMS) and Incident Command and integrate those principles into all ESF-3 planning and response operations.
- B. Coordination with all supporting and other appropriate departments/agencies and organizations will be performed to ensure continual operational readiness.
- C. In coordination with, and in support of, the State Assessment Team (SAT), ESF-3 will assess the situation (both pre- and post-event), and in coordination with local emergency management officials, develop strategies to respond to the emergency.
- D. Public Works and Engineering Services
 - 1. The Department of Health and Environmental Control will provide overall guidance concerning water supply matters and will provide guidance for sewage treatment and disposal.
 - 2. The Department of Transportation will provide overall guidance concerning structural safety of damaged bridges and roads and will provide guidance for the restoration of the transportation infrastructure.
 - 3. ESF-3 will coordinate with SCEMD and other ESF-3 support agencies to provide emergency power and the restoration of water and sewer services, debris management, water (potable and non-potable) and ice supplies, and engineering activities as required.

4. ESF-3 will cooperate and coordinate with other ESFs to ensure that state assets are deployed effectively and in response to appropriate priorities for the protection of the health, safety, and welfare of state citizens.

E. Damage Assessment

1. Local officials shall conduct an Initial Damage Assessment (IDA) to ascertain the dollar amount of damage to public and private property. The results of the IDA will be reviewed by SCEMD to determine if a Preliminary Damage Assessment (PDA) will be performed to prepare a request for a Presidential Declaration.
2. When activated, ESF-3 will support SCEMD in the direction and execution of PDA operations. PDAs will be performed by teams consisting of personnel from the Department of Revenue, Department of Transportation, Department of Natural Resources, SCEMD, and FEMA.
3. For long term damage assessment activities following a significant disaster, maximum use will be made of supporting agency staff, South Carolina Volunteer Technical Assistance Group (VOLTAG) and other qualified volunteer organizations such as private businesses, insurance companies, and associations to support operations in the field under the overall supervision of the Division of Procurement Services.

IV. ESF ACTIONS

The emergency operations necessary for the performance of the Public Works and Engineering Services function include but are not limited to:

A. Preparedness

1. General
 - a. Participate in state exercises and conduct, at least annually, an ESF-3 exercise to validate this annex and supporting SOPs.
 - b. Annually review the Department of Homeland Security Universal Task List and integrate tasks as appropriate.
 - c. Ensure all ESF-3 personnel integrate NIMS principles in all planning. All ESF personnel will complete all required NIMS training, as outlined in the 2006 Department of Homeland Security (DHS) training guidance.

2. Public Works and Engineering

- a. Plan for the provision of water (potable and non-potable) and ice into the disaster area if local supplies become inadequate.
- b. In coordination with the SAT and local emergency management officials, develop policy for conservation, distribution and use of potable and firefighting water.
- c. Identify and locate chemicals to maintain potability of water supply.
- d. Include in ESF-3 Standard Operating Procedures an alerting list, to include points-of-contact and telephone numbers, of agencies, counties, municipalities and organizations supporting public works and engineering functions.
- e. Maintain a current inventory of equipment and supplies, to include points-of-contact and telephone numbers, required to sustain emergency operations, including emergency power generators.
- f. Establish operational needs for restoration of public works service during the emergency.
- g. Develop and maintain listings of commercial and industrial suppliers of services and products, to include points-of-contact and telephone numbers, associated with public works and engineering functions.
- h. Plan engineering, contracting, and procurement assistance for emergency debris, snow or ice clearance, demolition, public works repair, and water supply, and sewer missions.
- i. In conjunction with ESF-19, plan for use of state military resources to support ESF-3 operations.

3. Damage Assessment

Coordinate the deployment of state damage assessment teams, VOLTAG and other engineer teams into any area of the state.

B. Response

1. Public Works and Engineering

- a. Identify water and sewer service restoration, debris management, potable water supply, and engineering requirements as soon as possible.
- b. Evaluate status of current resources to support ESF-3 operations.
- c. Establish priorities to clear roads, repair damaged water/sewer systems and coordinate the provision of temporary, alternate or interim sources of emergency power and water/sewer services.
- d. As needed, recommend priorities for water and other resource allocations.
- e. Procure equipment, specialized labor, and transportation to repair or restore public works systems.
- f. Coordinate with ESF-19 for use of state military assets.
- g. Coordinate with ESF-6 for shelter support requirements.
- h. Coordinate with ESF-17 for advice and assistance regarding disposal of debris containing or consisting of animal carcasses.
- i. Coordinate with ESF-10 for advice and assistance regarding disposal of hazardous materials.
- j. Coordinate with ESF-4 for advice and assistance regarding firefighting water supply.

2. Damage Assessment

- a. At the onset of an emergency or disaster, notify department/agency heads and local governments and volunteer organizations to have damage assessment and safety evaluation personnel available to deploy to affected area(s) and pre-position as appropriate.
- b. Provide damage assessment coordinators and support for joint state/federal teams into the affected area, as required.
- c. Coordinate with ESF-12 for public utility damage assessment information.

- d. Collect, evaluate, and send damage assessment reports to ESF-5 and other appropriate agencies.
- e. Coordinate state and local damage assessment operations with related federal activities.
- f. Prepare damage assessment documents in conjunction with SCEMD where appropriate for a presidential emergency or major disaster declaration when necessary.

C. Recovery

1. General

- a. Anticipate and plan for arrival of and coordination with FEMA ESF-3 personnel in the SEOC and the Joint Field Office (JFO).
- b. Ensure that ESF-3 team members, their agencies, or other tasked organizations, maintain appropriate records of time and costs incurred during the event.

2. Public Works and Engineering

- a. Maintain coordination with all supporting agencies and organizations on operational priorities for emergency repair and restoration. Coordinate, as needed, for debris management operations on public and private property.
- b. Continue to monitor restoration operations when and where needed as long as necessary and until all services have been restored.

3. Damage Assessment

In conjunction with FEMA, develop disaster project worksheets as required.

D. Mitigation

- 1. Support and plan for mitigation measures.
- 2. Support requests and directives resulting from the Governor and/or FEMA concerning mitigation and/or re-development activities.
- 3. Document matters that may be needed for inclusion in agency or state/federal briefings, situation reports and action plans.

V. RESPONSIBILITIES

- A. General: All ESF-3 primary and support agencies must maintain inventories and procedures to deploy their agency's public works and engineering assets.
- B. Budget and Control Board, Division of Procurement Services, Materials Management Office
 - 1. The coordination of all ESF-3 administrative, management, planning, training, preparedness/mitigation, response and recovery activities.
 - 2. Identify, train, and assign personnel to staff ESF-3 in the SEOC.
 - 3. Notify all ESF-3 supporting agencies upon activation.
 - 4. Provide all available public works and engineering assets.
 - 5. Establish operational needs for restoration of public works service during the emergency.
 - 6. Identify water and sewer service restoration, debris management, potable water supply, and engineering requirements as soon as possible.
 - 7. Establish priorities to clear roads, repair damaged water/sewer systems and coordinate the provision of temporary, alternate or interim sources of emergency power and water/sewer services.
 - 8. As needed, recommend priorities for water and other resource allocations.
 - 9. In coordination with the State Assessment Team (SAT) and local emergency management officials, develop policy for conservation, distribution and use of potable and firefighting water.
 - 10. In conjunction with ESF-19, plan for use of state military resources to support ESF-3 operations.
 - 11. Develop and maintain listings of commercial and industrial suppliers of services and products, to include points-of-contact and telephone numbers, associated with public works and engineering functions.
 - 12. As needed, recommend priorities for water and other resource allocations.

C. Civil Air Patrol

1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.
2. Provide aerial photography, still and video, during traffic surveillance and damage assessment missions using satellite and/or Radio Frequency (RF) links for image transmission to SEOC, Emergency Communications (ECV) and/or other agencies equipped to receive, where possible.

D. Clemson University Cooperative Extension Service

1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.
2. Conduct farm livestock and crop damage assessment and provide information to ESF-3 and ESF-17.

E. Department of Agriculture

1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.
2. Provide inspectors and advise on agricultural debris removal.
3. Conduct damage assessment.

F. Department of Health and Environmental Control, Office of Environmental Quality Control

1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.
2. Provide emergency survey, surveillance, sampling, testing, and monitoring of water and sewage pumping, treatment, distribution, and collection systems to ensure public health and safety integrity of such systems.
3. Provide technical assistance concerning the disposal of waste materials, including household hazardous waste, agricultural waste, and debris containing or consisting of animal carcasses.

4. Identify and locate chemicals to maintain potability of water supply.
5. Develop and maintain listings of commercial and industrial suppliers of services and products, to include points-of-contact and telephone numbers, associated with public works and engineering functions.
6. In coordination with the SAT and local emergency management officials, develop policy for conservation, distribution and use of potable and firefighting water.
7. Identify water and sewer service restoration, debris management, potable water supply, and engineering requirements as soon as possible.
8. Coordinate with ESF-17 for advice and assistance regarding disposal of debris containing or consisting of animal carcasses.
9. Coordinate with ESF-10 for advice and assistance regarding disposal of hazardous materials.

G. Department of Labor, Licensing and Regulation

1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.
2. Provide damage assessment technical assistance; and building, contracting and engineering inspectors.
3. Division of Fire and Life Safety
 - a. Provide inspectors (engineering and fire).
 - b. Inspect all LP gas installations in the affected area.
 - c. Inspect all explosives storage magazines in the affected area.

H. Department of Natural Resources; Land, Water, and Conservation

1. Identify, train, and assign personnel to maintain contact with and execute missions in support of ESF-3 during periods of activation.
2. Provide engineering inspectors and water testing capability.

3. Provide damage assessment information.

I. Department of Public Safety

1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.
2. Provide damage assessment information.

J. Department of Revenue

1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.
2. Provide damage assessment and personnel support.

K. Department of Transportation

1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.
2. Provide all available public works and engineering assets.
3. Provide damage assessment information.
4. Provide legal assistance including eminent domain and emergency demolition or stabilization of damaged structures and facilities.

L. Forestry Commission

1. Identify and assign personnel to maintain contact with ESF-3 during periods of activation.
2. Provide all available public works and engineering assets.
3. Provide damage assessment for forested areas.
4. Coordinate with ESF-4 for advice and assistance regarding firefighting water supply.

M. Office of Regulatory Staff

1. Identify, train, and assign personnel to maintain contact with and prepare to execute missions in support of ESF-3 during periods of activation.

2. Procure equipment, specialized labor, and transportation to repair or restore public works systems.
3. Provide damage assessment support for public utilities.
4. Provide public utility restoration support.

N. US Army Corps of Engineers

1. Identify, train, and assign personnel to staff ESF-3 during periods of activation.
2. Plan for the provision of water (potable and non-potable) and ice into the disaster area if local supplies become inadequate.
3. Provide all available public works and engineering assets.

O. Clemson University Regulatory and Public Service Programs

1. Identify, train, and assign personnel to maintain contact with and prepare to conduct operations in support of ESF-3 during periods of activation.
2. Provide personnel for water testing.
3. Provide laboratory analysis for pesticide contamination.

VI. FEDERAL INTERFACE

A. This annex is supported by the Federal Response Plan ESF-3, Public Works and Engineering. Activities within the scope of Federal ESF-3 include:

1. Coordination and support of infrastructure risk and vulnerability assessments.
2. Participation in pre-incident activities, such as pre-positioning assessment teams and contractors, and deployment of other advance teams.
3. Participation in post-incident assessments of public works and infrastructure to help determine critical needs and potential workloads.
4. Implementation of structural and nonstructural mitigation measures to minimize adverse effects or fully protect resources prior to an event.

5. Execution of emergency contracting support for life-saving and life-sustaining services, to include providing emergency power, and other emergency commodities and services.
 6. Providing assistance in the monitoring and stabilization of damaged structures designed as immediate hazards to public health and safety; and structural specialist expertise to support inspection of mass care facilities and urban search and rescue operations.
 7. Providing emergency repair of damaged infrastructure and critical public facilities (temporary power, emergency water, sanitation systems, etc); and supporting the restoration of critical navigation, flood control, and water infrastructure systems.
 8. Management, monitoring, and/or providing technical advice in the clearance, removal, and disposal of contaminated and uncontaminated debris from public property and the reestablishment of ground and water routes into impacted areas.
 9. Providing technical assistance to include engineering expertise, construction management, contracting, inspection of private/commercial structures and real estate services.
 10. Implementation and management of the federal public assistance program and other recovery programs to include efforts to permanently repair, replace, or relocate damaged or destroyed public facilities and infrastructure.
- B. A Federal ESF-3 representative will normally deploy to the SEOC as a part of the Emergency Response Team – Advance Element (ERT-A) and a supplemental ESF-3 cell will also deploy which will evolve into the ESF-3 cell after the JFO is established.
- C. All ESF-3 personnel will be familiar with the National Response Plan (NRP) and the corresponding annex with federal counterpart concepts, actions and responsibilities. This familiarization will include but not be limited to the make up, functions and responsibilities of the Emergency Response Team – Advanced Element (ERT-A), Interagency Incident Management Groups (IIMG) and the Joint Field Office (JFO).
- D. State ESF-3 will coordinate with Federal ESF-3 to obtain federal assistance as required.